

SEQUENCE LISTING

<110> Pavan, William J.
 Loftus, Stacie K.
 The Government of the United States of America
 as represented by The Secretary of the
 Department of Health and Human Services

<120> Alteration of RAB38 Function to Modulate Mammalian
 Pigmentation

<130> 015280-148100US

<140> US 10/501,611
 <141> 2004-07-14

<150> US 60/349,929
 <151> 2002-01-18

<150> WO PCT/US03/01622
 <151> 2003-01-17

<160> 28

<170> PatentIn Ver. 2.1

<210> 1
 <211> 8
 <212> DNA
 <213> Mus musculus

<220>
 <223> Rab38 sequence of wildtype allele in C57Bl6/J +/+
 DNA

<400> 1
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<210> 2
 <211> 8
 <212> DNA
 <213> Mus musculus

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 <223> Rab38 sequence of chocolate (cht) mutant allele in
 c57Bl6/J Rab38cht/+ DNA

<400> 2
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<210> 3
 <211> 34
 <212> PRT
 <213> Homo sapiens

<220>
 <223> human RAB38 highly conserved N-terminal region

8

8

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Asp Leu Gly Val Gly Lys Thr Ser Ile Ile Lys Arg Tyr Val His Gln
 20 25 30

Asn Phe

<210> 4
 <211> 34
 <212> PRT
 <213> Rattus norvegicus

<220>
 <223> rat RAB38 highly conserved N-terminal region

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Asp Leu Gly Val Gly Lys Thr Ser Ile Ile Lys Arg Tyr Val His Gln
 20 25 30

Asn Phe

<210> 5
 <211> 34
 <212> PRT
 <213> Mus musculus

<220>
 <223> mouse RAB38 highly conserved N-terminal region

<400> 5
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Asp Leu Gly Val Gly Lys Thr Ser Ile Ile Lys Arg Tyr Val His Gln
 20 25 30

Asn Phe

<210> 6
 <211> 47
 <212> PRT
 <213> Homo sapiens

<220>
 <223> human RAB3a N-terminal region

<400> 6
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Gln Asn Phe Asp Tyr Met Phe Lys Ile Leu Ile Ile Gly Asn Ser Ser
 20 25 30

Val Gly Lys Thr Ser Phe Leu Phe Arg Tyr Ala Asp Asp Ser Phe
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<210> 7
 <211> 45
 <212> PRT
 <213> Homo sapiens

<220>
 <223> human RAB5 N-terminal region

<400> 7
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 1 5 10 15

Lys Ile Cys Gln Phe Lys Leu Val Leu Leu Gly Glu Ser Ala Val Gly
 20 25 30

Lys Ser Ser Leu Val Leu Arg Phe Val Lys Gly Gln Phe
 35 40 45

<210> 8
 <211> 28
 <212> PRT
 <213> Homo sapiens

<220>
 <223> human N-RAS N-terminal region

<400> 8
 Met Thr Glu Tyr Lys Leu Val Val Val Gly Ala Gly Gly Val Gly Lys
 1 5 10 15

Ser Ala Leu Thr Ile Gln Leu Ile Gln Asn His Phe
 20 25

<210> 9
 <211> 1439
 <212> DNA
 <213> Homo sapiens

<220>
 <223> Rab38 cDNA

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 gatgcctggg caagcacata cttgcaaatg agtgtgacct cctagagtct atagaaccgg 660
 acattgtgaa gccccatctc acatcgcccc aggttgtcag ctgctctggc tgtgccccaa 720
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<210> 10
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 <212> DNA
 <213> Homo sapiens

<220>
 <223> Rab38 exon 1 and surrounding intron sequence

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tcgggtgccc	gccccggctg
tgccttcccag	agcaagctcc
tcacaaaggag	cacctgtaca
cattatcaag	cgctatgtgc
ggacttcgcg	ctgaagggtgc
ggacattgct	g
	291

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 <211> 281
 <212> DNA
 <213> Homo sapiens

<220>
 <223> Rab38 exon 2

<400> 11	
gtcaagaaag	atthtgaaac
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aggagcatgg	cttcgtagga
atgacaagag	tttattaccg
ttgaagccgt	ggcaaagtgg
agccagtgtc	agtggttctg
acaatggact	caagatggac
catcagccaa	g
	281

<210> 12
 <211> 868
 <212> DNA
 <213> Homo sapiens

<220>
 <223> Rab38 exon 3 and surrounding intron sequence

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gcgtcaggat	agggaaagcac
aaagagggaac	agcaaatgtt
gcttttataaaa	tattagtctg
atgcctgggc	aagcacatac
cattgtgaag	ccccatctca
ctagaaggct	cctctgctgg
tcagtttttc	cttattacca
atgactgtat	ggttcctgtc
tttcccaccc	catcagcaca
ctgtttttatc	attgagcaaa
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aaggggaata acagagcaag gcagaggta agctaagtgt ggggatttgt cttgccctgg 540
tgtgtctttg ttcaggatc aatttggtcc cgggtggtct gataggctta ttaaatagaa 600
accattcatg gtagacctaa gggttgkctg tgatgtttct cttcagagtc gtgtgcacag 660
gcagcctggg cttttgttgt cacttgctgt gccctgaatg ctggtttaac tgaaaactgt 720
atggaaagat ctgctccctg tatgtgcctt tctttcagct tcctctgact caagctgcag 780
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<210> 13
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:synthetic TYRP15'T3F DNA

<400> 13
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<210> 14
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:synthetic TYRP15'T7R DNA

<400> 14
gcgcgtaata cgactcacta tagggcccag ttgcaaaatt ccagt 45

<210> 15
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:synthetic MLSN R T7 DNA

<400> 15
gcgggtaata cgactcacta taggggccac aaacatgtcc tacttac 47

<210> 16
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:synthetic MLSN FT3 DNA

<400> 16
gcgcgaatta accctcacta aagggaagct tccggactct ctac 44

<210> 17
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:PCR
 amplification primer Rab38 Ex1F

 <400> 17
 taggaaggag gattaaaccc g 21

 <210> 18
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:PCR
 amplification primer Rab38 Ex 1R

 <400> 18
 gaactcctca tggctcactc c 21

 <210> 19
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:PCR
 amplification primer Rab38 Ex2F

 <400> 19
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 <210> 20
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:PCR
 amplification primer Rab38 Ex2R

 <400> 20
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 <210> 21
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:PCR
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<400> 21
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<210> 22
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:PCR
 amplification primer Rab38 Ex3R

<400> 22
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<210> 23
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:amplification
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<400> 23
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<210> 24
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:amplification
 primer cht Ex1R

<400> 24
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<210> 25
 <211> 49
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:PCR
 amplification att site linker primer AttB1-RRab

<400> 25
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<210> 26
 <211> 51
 <212> DNA
 <213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence:PCR
      amplification att site linker primer
      AttB2-RRab-STP

<400> 26
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<210> 27
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:oligonucleotide
      complementary to segment of RAB38 mRNA translation
      initiation codon

<400> 27
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<210> 28
<211> 1412
<212> DNA
<213> Homo sapiens

<220>
<223> human RAB38 DNA sequence

<400> 28
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